

<b>Wells-Ogunquit Community School District</b>	)	<b>Departmental</b>
<b>York County</b>	)	<b>Findings of Fact and Order</b>
<b>Wells, Maine</b>	)	<b>Air Emission License</b>
<b>A-826-71-C-A</b>	)	<b>Amendment #2</b>

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant’s file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

## **I. REGISTRATION**

### **A. Introduction**

1. Wells-Ogunquit Community School District (Wells-Ogunquit CSD) was issued Air Emission License A-826-71-A-N on April 9<sup>th</sup>, 2002 permitting the operation of emission sources associated with their Wells, Maine educational facility. Wells-Ogunquit CSD was also issued an amendment to their license (A-826-71-B-A) allowing for the removal of boilers designated Junior High #1 and #2 and Ward Gym, and replacing them with two new boilers.
2. Wells-Ogunquit CSD has requested an amendment of their air emissions license to reflect the following:
  - Reinstatement the original Junior High boilers that were removed per Amendment A-826-71-B-A.
  - Remove the two proposed Junior High boilers that were licensed per Amendment A-826-71-B-A.
  - Add a new boiler to be designated Junior High #3.
  - Install two emergency generators.

B. Emission Equipment

Wells-Ogunquit CSD is applying to include the operation of the following equipment to its air emissions license:

**Fuel Burning Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (gal/hr)</u></b>	<b><u>Fuel Type, % sulfur</u></b>	<b><u>Stack #</u></b>
Junior High Boiler #1 *	2.289	16.35	#2 fuel oil, 0.35%	2
Junior High Boiler #2 *	2.289	16.35	#2 fuel oil, 0.35%	2
Junior High Boiler #3 **	5.67	40.50	#2 fuel oil, 0.35%	1A
Elementary School Emergency Generator #1 **	1.71	12.46	Diesel Fuel, 0.05%	-
Junior High Emergency Generator #2 **	0.68	4.89	Diesel Fuel, 0.05%	-

\* Existing equipment reinstated into License.

\*\* Proposed new equipment.

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as given in Maine’s Air Regulations. This modification is determined to be a minor modification and has been processed as such.

**II. BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Department's regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

**B. Junior High Boilers #1 and #2**

Boilers designated in License A-826-71-A-N as Junior High Boilers #1 and #2 shall be remaining in operation. Each was manufactured in 1987 and is rated at 2.289 MMBtu/hr. Therefore, Junior High #1 and #2 are not subject to EPA New Source Performance Standards (NSPS) Subpart Dc for boilers with a heat input of 10 MMBtu/hr or greater.

A summary of the BPT analysis for Junior High Boilers #1 and #2 is as follows:

1. A BPT PM emission limit of 0.08 lb PM/MMBtu shall be used.
2. SO<sub>2</sub> emissions are derived from a mass balance on the use of #2 fuel oil with a sulfur content of 0.35%.
3. A BPT NO<sub>x</sub> emission rate of 0.20 lb NO<sub>x</sub>/MMBtu shall be used
4. CO and VOC emissions rates are based on AP-42 data dated 9/98.
5. Visible emissions from Junior High Boilers #1 and #2 shall not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than one (1), six (6) minute block average in a 3-hour period.

**C. Junior High Boiler #3**

Wells-Ogunquit CSD will be installing a H.B. Smith boiler rated at 5.67 MMBtu/hr. This boiler will be designated Junior High Boiler #3. Junior High Boiler #3 is not subject to EPA New Source Performance Standards (NSPS) Subpart Dc for boilers with a heat input of 10 MMBtu/hr or greater.

A summary of the BACT analysis for Junior High #3 is as follows:

1. A PM emission limit is derived from Chapter 103, however, a BACT emission limit of 0.08 lb PM/MMBtu is more stringent and shall be used.
2. SO<sub>2</sub> emissions are derived from a mass balance on the use of #2 fuel oil with a sulfur content of 0.35%.

3. A BACT NO<sub>x</sub> emission rate of 0.20 lb NO<sub>x</sub>/MMBtu shall be used.
4. CO and VOC emissions rates are based on AP-42 data dated 9/98.
5. Visible emissions from Junior High Boiler #3 shall not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than one (1), six (6) minute block average in a 3-hour period.

D. Emergency Generators #1 and #2

Wells-Ogunquit CSD will be installing two emergency generators. Emergency generator #1, which will be installed at the Elementary School, is rated at 150 kW with a fuel burning capacity 12.46 gal/hr. Emergency generator #2, which will be installed at the Junior High School, is rated at 60 kW with a fuel burning capacity 4.98 gal/hr.

A summary of the BACT analysis for emergency generators #1 and #2 is as follows:

1. Emergency generators #1 and #2 shall be limited to 500 hours per year of operation each (12 month rolling total). Operation logs shall be kept and hour meters shall be maintained and operated to demonstrate compliance.
2. A BACT PM emission limit derived from 0.12 lb PM/MMBtu shall be used.
3. SO<sub>2</sub> emissions are derived from a mass balance on the use of diesel fuel with a sulfur content of 0.05%.
4. NO<sub>x</sub>, CO, VOC emissions rates are based on AP-42 data dated 10/96.
5. Visible emissions from emergency generators #1 and #2 shall each not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period.

“Emergency” is defined in Chapter 100 and throughout this document as: “... any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.”

E. Annual Emission Restrictions

Wells-Ogunquit Community School District shall be restricted to the following annual emissions:

1. Total annual facility fuel use shall be limited to 700,000 gallons of #2 fuel oil with a sulfur content not to exceed 0.35% by weight, based on a 12 month rolling total. Delivery receipts shall be kept documenting quantity received and sulfur content.
2. Emergency generators #1 and #2 shall be limited to no more than 500 hours per year of operation each, firing diesel fuel with a sulfur content not to exceed 0.05%. Delivery receipts shall be kept documenting sulfur content.
3. Total annual emission shall be limited to the following:

**Total Allowable Annual Emission for the Facility**  
(used to calculate the annual license fee)  
Tons/year

<b><u>Emission Units</u></b>	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
All Boilers	3.92	3.92	17.15	22.1	1.75	0.12
Emergency Generator #1	0.05	0.05	0.02	1.89	0.41	0.15
Emergency Generator #2	0.02	0.02	0.01	0.75	0.16	0.06
Degreaser	-	-	-	-	-	0.03
<b>Total</b>	<b>3.99</b>	<b>3.99</b>	<b>17.18</b>	<b>24.74</b>	<b>2.32</b>	<b>0.36</b>

### III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a non major source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. An air quality analysis is not required for this amendment.

### ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

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**Departmental  
Findings of Fact and Order  
Air Emission License  
Amendment #2**

The Department hereby grants Air Emission License Amendment A-826-71-C-A subject to the conditions found in Air Emission License A-826-71-A-N, Amendment A-826-71-B-A and to the following conditions:

**The following condition shall replace condition (16) in Air Emission License A-826-71-B-A:**

(16) Boilers

- A. Total facility fuel use shall not exceed 700,000 gals/yr. of #2 fuel oil with a sulfur content not to exceed 0.35% sulfur by weight based on a 12-month rolling total. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the sulfur content of the fuel. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total. [MEDEP Chapter 115, BPT, BACT]
- B. Emissions shall not exceed the following: [MEDEP Chapter 115, BPT, BACT]

<b>Equipment</b>		<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Junior High Boiler #1	lb/hr	0.18	0.18	0.81	0.46	0.08	0.01
Junior High Boiler #2	lb/hr	0.18	0.18	0.81	0.46	0.08	0.01
Junior High Boiler #3	lb/MMBtu	0.08	-	-	-	-	-
	lb/hr	0.45	0.45	2.00	1.13	0.20	0.01
High School Boiler #1	lb/MMBtu	0.08	-	-	-	-	-
	lb/hr	0.42	0.42	2.04	2.34	0.19	0.01
High School Boiler #2	lb/MMBtu	0.08	-	-	-	-	-
	lb/hr	0.42	0.42	2.04	2.34	0.19	0.01
Elem. School Boiler #1	lb/MMBtu	0.08	-	-	-	-	-
	lb/hr	0.30	0.30	1.46	1.67	0.13	0.01
Elem. School Boiler #2	lb/MMBtu	0.08	-	-	-	-	-
	lb/hr	0.30	0.30	1.46	1.67	0.13	0.01

C. Visible Emissions

Visible emissions from the Boilers shall not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than one (1), six (6) minute block average in a 3-hour period. [MEDEP Chapter 101]

**New Conditions**

(1) Emergency Generators #1 and #2

- A. Emergency generators #1 and #2 shall be limited to 500 hours per year of operation each (12 month rolling total). Operation logs shall be kept and hour meters shall be maintained and operated to demonstrate compliance. [MEDEP Chapter 115, BACT]
- B. Emergency generators #1 and #2 shall fire diesel fuel with a sulfur content not to exceed 0.05%. Delivery receipts shall be kept documenting sulfur content. [MEDEP Chapter 115, BACT]
- C. Emissions from Emergency Generators #1 and #2 shall not exceed the following: [MEDEP Chapter 115, BACT]

	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Emission Unit	Lb/hr	Lb/hr	Lb/hr	Lb/hr	Lb/hr	Lb/hr
Elementary Sch. Emergency Gen. #1	0.21	0.21	0.09	7.54	1.62	0.60
Junior High Emergency Gen. #2	0.08	0.08	0.03	3.00	0.65	0.24

- D. Visible emissions from emergency generators #1 and #2 shall not exceed an opacity of 20 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period. [MEDEP Chapter 101]

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(2) This amendment shall expire concurrently with Air Emission License  
A-826-71-A-N.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 4/12/2004

Date of application acceptance: 4/29/2004

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by, Jonathan Voisine, Bureau of Air Quality